1388-10

1988 MANAGEMENT PLAN

SOUTHEAST ALASKA DRIFT GILL NET FISHERY

By

Southeast Region Staff

Alaska Department of Fish and Game
Division of Commercial Fisheries
Southeast Region

May 1988

Regional Information Report[1] No. 1J88-10

---

1 The Regional Information Report Series was established in 1987 to provide an information access system for all unpublished divisional reports. These reports frequently serve diverse ad hoc informational purposes or archive basic uninterpreted data. To accommodate needs for up-to-date information, reports in this series may contain preliminary data.

MANAGEMENT PLAN

SOUTHEAST ALASKA DRIFT GILL NET FISHERY - 1988

INTRODUCTION

Southeast Alaska salmon stocks are commercially harvested by purse seine, drift gill net, troll and trap gear types. This management plan provides an overview of the 1988 drift gill net fishery. The expected salmon run sizes, management problems, and harvest strategies will be discussed. The staff members listed at the end of this plan are available to provide further details.

The current level for limited entry permits in the Southeast Alaska drift gill net fishery is 464. A substantial majority of these are actively fished each year. Drift gill net landings of salmon have averaged approximately 1.9 million fish annually since 1960. Over the same time period, they have represented an average of 41% of the total southeast Alaska commercial sockeye salmon harvest, 29% of the chum, 13% of the coho, 6% of the pink and 4% of the chinook salmon. The fishery targets on and is managed for different species depending on the time of the year and area of fishing. There are no directed gill net fisheries for natural stock chinook salmon.

There are six drift gill net fishing areas in Southeast Alaska: District 1, Tree Point - Portland Canal; District 6, Prince of Wales; District 8, Stikine; District 11, Taku - Snettisham; District 15, Lynn Canal; and Lower Clarence Strait encompassing portions of Districts 1 and 2. Additionally, drift gill net fisheries occur in several terminal areas adjacent to enhancement sites. The salmon species harvested, timing of runs, management problems, and available information used for management are quite variable among the different areas. This management plan will consider each area separately.

SALMON RETURNS

In southeast Alaska a formal salmon forecast is available only for pink salmon. The expected returns of sockeye, chum, and coho salmon presented in this management plan are formulated from parent year catch and escapement information and are expressed in terms of relative magnitude as opposed to absolute numbers.

Overall sockeye salmon runs entering the drift gillnet fishing areas are expected to be above average for the 1988 season. Returns of natural summer chum salmon are anticipated to be average. Above average returns of fall chum salmon are expected in the Lynn Canal drift gill net fishing area. Returns of hatchery produced summer chum salmon are expected to contribute good

landings in the Districts 1 and 11 fisheries. Overall above average coho salmon returns are expected. The 1988 pink salmon forecast indicates that approximately 42.1 million fish will be available for harvest by all gear types. Good availability of pink salmon is expected in the southern drift gill net areas while low pink salmon abundance is expected in the northern areas.

MANAGEMENT APPROACH

The lack of accurate pre-season forecasts for salmon runs entering the various drift gill net fishing areas makes it difficult to develop a rigid management plan. Instead, this plan presents a general outlook of how the season is expected to develop. Some specific management approaches presented here may have to be altered depending on inseason assessments of salmon run strength.

The primary objectives for the management of the 1988 drift gill net fishery are as follows:

1. Obtain overall salmon spawning escapement goals with the best possible distribution to all systems.

2. Provide for an orderly fishery while harvesting those fish in excess of spawning escapement needs.

3. Promote the harvest and processing of good quality fish within the constraints dictated by run size.

4. Manage the drift gill net fisheries in Districts 1, 6, 8 and 11 consistent with the provisions of the U.S./Canada Pacific Salmon Treaty as specified by the Alaska Board of Fisheries.

5. Manage the drift gill net fisheries for a catch of 7,600 chinook salmon, exclusive of new Alaska hatchery produced fish.

Achievement of these management objectives will be accomplished by inseason adjustments of fishing time and harvest areas in accordance with salmon run strength and timing. The comparison of the current year fishing performance to historical fishing success (i.e., catch per unit of effort analysis) is a major component of inseason run strength assessment. This approach assumes that commercial catch rates are a true reflection of run strength by time period, and can be relied upon to indicate salmon escapement rates through the fishing area. However, experience has shown that management of salmon fisheries based only on catch per unit of effort analysis can be misleading, especially for mixed stock situations.

Although fishery performance will be an important factor in the drift gill net inseason management process, other run strength indicators, when available, will be utilized to the extent possible. Information on spawning

escapements, stock separation by scale characteristics, test fishing, observed salmon concentrations or schooling in sanctuary areas, and catches from other fisheries comprise the types of additional information also considered by managers.

The increasing availability of hatchery produced salmon is a major factor in the management of the southeast Alaska drift gill net fisheries. Where inseason management is based on fishery performance, it may become difficult to gauge natural stock run strength if significant numbers of hatchery fish are included in the catch. Where possible, the hatchery component of the catch will be accounted for when evaluating fishery performance.

Chinook Salmon Catch

The Alaska Board of Fisheries established new regulations instructing the department to manage the southeast Alaska drift gill net fishery for a catch limit of 7,600 chinook salmon, exclusive of new Alaskan hatchery produced fish. The board took this action to ensure that all user groups maintain their recent year share of chinook salmon harvest levels specified by the U.S./Canada Pacific Salmon Treaty.

The drift gill net catch of chinook salmon has been higher than the harvest limit during 8 of the last 13 years, since the elimination of directed chinook salmon fisheries. It is not known if any additional management measures will be needed to maintain the 1988 chinook salmon catch to the specified level. The need for any management measures will depend on the in-season evaluation of catch rates relative to the seasonal catch ceiling. The board recommended night time closures as the primary management measure to conserve small chinook salmon. Additionally, early season area closures will be maintained to minimize the incidental harvest of mature chinook salmon near spawning rivers.

Weekly Fishing Announcements

Inseason management of the Districts 1 and 2 drift gill net fisheries is conducted by the Ketchikan Area staff, Districts 6 and 8 by the Petersburg and Wrangell area staff, District 11 by the Juneau area staff, and District 15 by the Haines area staff. Because fishermen can move freely among all gill net fisheries, weekly fishing announcements for all areas will be coordinated by the Juneau Regional Office. These will normally be released simultaneously in all Area Offices by mid-afternoon each Thursday during the fishing season.

Weekly Fishing Periods

Drift gill net weekly fishing periods can be expected to begin at 12:01 p.m. Sunday in all areas, except the Lower Clarence Strait gill net area and terminal hatchery openings. Fishing time in Lower Clarence Strait will be dependent on purse seine fishing time in the area.

U.S./CANADA PACIFIC SALMON TREATY

The treaty between the United States and Canada concerning Pacific salmon will influence management of the Districts 1, 6, 8, and 11 drift gill net fisheries. For the 1988 season, the provisions of a new annex for transboundary rivers will be in effect for the first of a five year agreement. The management provisions necessitated by the treaty will be considered separately under the specific management plan for each respective fishery. Gillnetters are encouraged to contact local department staff for more detailed information concerning the treaty.

TREE POINT AND PORTLAND CANAL FISHERY

Introduction

The Tree Point and Portland Canal gill net area consists of Sections 1-A and 1-B. This fishery targets on chum and sockeye salmon early, followed by pink salmon, and finally chum and coho salmon at the end of the season. Historical catch statistics for the Tree Point gill net fishery are shown in Table 1.

1988 Outlook

The sockeye salmon fishery will be managed in accordance with the U.S./Canada Pacific Salmon Treaty. The treaty specifies an average annual harvest of 130,000 sockeye salmon. A catch of approximately 167,000 sockeye salmon occurred in 1985, 146,000 in 1986 and 108,000 in 1987. The average annual catch limit is viewed as a level to be maintained over the long term. Inseason management will be based on run strength assessments to achieve conservation goals and not to maintain the 1988 seasonal catch at the limit.

Sockeye salmon returns to Canadian systems, which contribute significant numbers of fish to the Tree Point drift gill net fishery, are expected to be average or above, while returns to Hugh Smith Lake, a local U.S. spawning system, are expected to be below average. Chum salmon returns to natural

Table 1. Southeast Alaska annual Portland Canal/Tree Point (District 1) commercial drift gill net salmon catches in numbers by species. (ADF&G 1/10/88)

Year	Chinook	Sockeye	Coho	Pink	Chum	Total
1960	1,214	14,281	4,312	19,823	98,971	138,601
1961	907	35,269	4,067	91,803	35,635	167,681
1962	1,498	41,174	12,110	155,690	36,578	247,050
1963	508	22,037	3,110	93,651	41,642	160,948
1964	1,098	47,070	15,707	162,476	79,156	305,507
1965	1,079	53,566	10,675	60,772	21,753	147,845
1966	642	66,063	9,362	275,634	32,818	384,519
1967	2,186	74,071	3,112	82,312	29,017	190,698
1968	587	66,535	16,404	249,421	93,341	426,288
1969	744	89,752	3,304	87,831	20,604	202,235
1970	340	52,765	16,425	516,105	68,097	653,732
1971	778	116,101	5,170	67,013	31,087	220,149
1972	1,296	134,533	35,695	178,387	156,767	506,678
1973	1,008	159,764	18,459	269,749	109,997	558,977
1974	776	113,299	21,327	166,637	81,770	383,809
1975	1,961	25,352	12,155	123,753	30,341	193,562
1976	1,807	117,965	16,275	210,061	36,262	382,370
1977	1,182	192,728	12,173	769,841	84,321	1,060,245
1978	2,591	153,409	47,797	531,879	116,731	852,407
1979	3,654	88,957	6,427	72,687	60,564	232,289
1980	1,531	108,766	19,995	675,466	155,118	960,876
1981	1,415	105,478	18,353	426,918	38,337	590,501
1982	3,967	190,575	28,201	347,252	84,559	654,554
1983	1,094	136,006	41,671	772,342	139,713	1,090,826
1984	1,494	88,226	35,417	717,003	227,658	1,069,798
1985	2,788	172,820	51,043	691,147	233,917	1,151,715
1986	1,033	145,631	61,592	906,309	272,495	1,387,060
Average 1960 to 1986	1,451	96,748	19,642	323,036	89,528	530,404
1987 PRELIMINARY	1,785	107,488	36,644	583,118	157,856	886,891

spawning systems are expected to be average or below average. Spawning escapements to Tombstone River were slightly above average in the parent year (1984) while below average spawning escapements were observed in Fish Creek. Both streams are located in Portland Canal.

Returns of summer chum, fall chum and coho salmon to the Nakat Inlet release site of the Southern Southeastern Alaska Regional Aquaculture Association (SSRAA) are expected to contribute fish to the gill net fishery. Peak chum catches from these releases are expected between mid-July to mid-August for the summer chum and late August and early September for the fall chum salmon.

The Pink Salmon Management Plan (5 AAC 33.260) establishes gill net fishing time in Section 1-B, in relation to District 1 purse seine fishing time when both gear types are concurrently harvesting the same pink salmon stocks, according to the following fishing time formula:

1. When the purse seine fishery is open for any portion of one day during a fishing week the drift gill net fishery must be open for 48 hours during the same fishing week.

2. When the purse seine fishery is open for any portion of two days during a fishing week the drift gill net fishery must be open for 96 hours during the same fishing week.

3. When the purse seine fishery is open for any portion of three or more days during a fishing week, the drift gill net fishery must be open for 120 hours during the same fishing week.

4. Conservation of other salmon species may override the use of the Pink Salmon Management Plan.

Management Goals

The following are specific goals for management of the 1988 District 1 drift gillnet fishery:

1. Manage the fishery in accordance with the Pink Salmon Management Plan (5 AAC 33.260).

2. Minimize, to the extent possible, the interception of salmon destined for watersheds where weak runs are expected.

Management Plan

The Tree Point gill net fishery will initially be open in the waters of Section 1-B for a four day fishing week beginning at 12:01 p.m., Sunday, June 19. This is the opening date specified by regulation. The duration of

subsequent fishing periods through early July will be based on the strength of sockeye and summer chum salmon returns and fishing effort levels. Sockeye salmon run strength to Canadian as well as Alaskan systems will be considered.

As in recent years, the catch of the Nakat Inlet release site chum salmon stock will not be included in the evaluation of natural stock fishery performance. The contribution of Nakat Inlet chum salmon will be determined by in-season retrieval of coded-wire tags. Enhanced chum salmon have contributed as much as 71% of individual weekly catches and as much as 31% of the seasonal take in recent years.

A closure of the northern portion of the gill net area can be expected, beginning in early July, to reduce the take of sockeye salmon returning to Hugh Smith Lake, located in Boca de Quadra. If needed, this closure will correspond to a similar closure of the adjacent waters to purse seine fishing.

Beginning in early to mid-July, the Section 1-B gill net fishery will be managed according to the Pink Salmon Management Plan. If the pink salmon run develops as forecasted, it is expected that two to five day weekly fishing periods will be allowed from mid-July through most of August.

Beginning in early September, depending on the duration of the pink salmon run, Section 1-B will be managed for harvesting fall chum and coho salmon. As in recent years, gillnetters can expect the season not to extend beyond September 20. The Nakat Inlet terminal special harvest area may be open after this date.

Section 1-A is subject to opening by emergency order. In 1988, no fishing in Section 1-A for Portland Canal chum salmon should be expected, unless it is determined that a harvestable surplus exists. The U.S./Canada Pacific Salmon Treaty entreats each nation to reduce interception of Portland Canal chum salmon stocks to the extent practical. Any management decision to fish in Portland Canal must assume there is sufficient additional surplus fish to support a Canadian as well as an Alaskan fishery.

LOWER CLARENCE STRAIT GILL NET FISHERY

Introduction

The Lower Clarence Strait gill net fishing area encompasses the waters of Districts 1 and 2 south of a line from the easternmost tip of Adams Point to Point McCartey light, north of the latitude of the easternmost tip of Island Point, east of a line one nautical mile east of a baseline that runs from the easternmost tip of Adams Point to the easternmost tip of Scott Point to the easternmost tip of Island Point, and west of the longitude of Point McCartey light. This is a relatively new fishing area established by the board in

1984 as a means to increase drift gill net pink salmon harvest opportunities. Any significant incidental catch of the other salmon species may result in inseason adjustments of the fishing time and area as specified by the board.

1987 Outlook

The target species is pink salmon. A very good overall pink salmon run is forecasted for southern Southeast Alaska. The anticipated distribution of the return is expected to be similar to 1986, with the majority of the harvest produced from pink salmon returning to spawn in Districts 1, 2, and 3. This should provide good availability of pink salmon in the Lower Clarence Strait gill net area.

Management Goals

The general conservation management goals discussed above apply for this new fishery, in addition to the following specific goals:

1. Manage the fishery in accordance with the Lower Clarence Strait Pink Salmon Management Plan (5 AAC 33.361).

2. Monitor the fishery to determine the incidental catch rates of salmon, other than pink salmon, by time and area.

Management Plan

The fishing time, open area, and allowable fishing gear is specified in the Lower Clarence Strait Pink Salmon Management Plan.

Salmon may be taken by drift gill nets in the Lower Clarence Strait area only from August 1 through August 31 during periods open to the taking of salmon by seine gear in the District 2 portions of the area. The area open to gill net fishing will be the same as that open for purse seine fishing in the District 2 portions of the area plus the portion of area in District 1 that is due east of the open area in District 2.

The minimum and maximum length for gill nets will be the same as those currently allowed in District 1, being 100 and 200 fathoms respectively. The mesh size of gill nets used to take salmon may not exceeed five inches stretched measure.

PRINCE OF WALES AND STIKINE FISHERIES

Introduction

The District 6 drift gill net fishery occurs in the waters of northern Clarence Strait and Sumner Strait, in regulatory Sections 6-A, 6-B and 6-C, and portions of Section 6-D. The Stikine fishery encompasses the waters of District 8 surrounding the Stikine River mouth. The management of these fisheries is inter-related due to their close proximity and salmon migration patterns which results in some major stocks being subjected to both fisheries. Two distinct management areas exist within each district. These being the Frederick Sound and Wrangell sides of District 8 and the Sumner Strait (Section 6-A) and Clarence Strait (Sections 6-B, 6-C, and 6-D) portions of District 6. Two terminal fishing areas for harvesting returns to the State operated Crystal Lake hatchery are also present and will be discussed in the terminal hatchery section of this management plan.

Historical catch patterns and limited tagging information indicate that Stikine River sockeye salmon stocks are a high portion of the fish available and District 8, make up a small proportion of the fish in Section 6-A and a very low percentage of the fish in Sections 6-B, 6-C and 6-D.

Management of these fisheries is based on sockeye salmon early, pink salmon in the middle, and coho salmon at the end of the season. Tables 2 and 3 show historical salmon catches for Districts 6 and 8.

1988 Outlook

The sockeye salmon fishery in both districts will be managed in accordance with the U.S./Canada Pacific Salmon Treaty. A new five year annex for transboundry rivers will be in effect for the first time in 1988. The new annex generally allows the District 6 fishery to be managed for harvesting local Alaskan sockeye salmon stocks and is not influenced under most conditions by the presence of stocks of Stikine River origin. Management of the District 8 fishery will be based on the need to harvest sockeye salmon of Stikine River origin as allowed by the sharing provisions of the new annex and the conservation of the resources. Gillnetters are encouraged to obtain more information concerning the detailed provisions of the new annex at local department offices.

The parent year (1983) sockeye salmon spawning escapement at Tahltan Lake, the primary producing area in the Stikine River drainage, was approximately 21,000 fish. This is in the low end of the established escapement goal range of from 20,000 to 40,000 sockeye salmon and some surplus fish are expected for harvest. Sockeye salmon returns to local Alaskan spawning areas have been increasing in recent years, but it is difficult to anticipate their production for 1988.

Table 2. Southeast Alaska annual Prince of Wales (District 6) commercial drift gill net salmon catches in numbers by species. (ADF&G 1/10/88)

Year	Chinook	Sockeye	Coho	Pink	Chum	Total
1960	46	10,354	336	1,246	502	12,484
1961	416	20,614	14,934	124,236	64,479	224,679
1962	1,308	47,033	42,276	256,620	59,119	406,356
1963	1,560	80,767	52,103	514,596	90,103	739,129
1964	2,082	76,541	64,654	443,086	44,218	630,581
1965	1,802	87,749	75,728	625,848	27,658	818,785
1966	1,665	89,847	62,823	400,932	40,756	596,023
1967	1,318	86,385	17,670	91,609	26,370	223,352
1968	1,316	64,671	67,151	169,107	61,366	363,611
1969	1,036	70,343	10,748	197,100	10,906	290,133
1970	785	42,778	35,470	94,892	32,231	206,156
1971	1,336	53,202	48,085	527,975	37,680	668,278
1972	2,573	101,338	93,427	89,467	72,382	359,187
1973	1,931	71,995	38,447	303,621	87,729	503,723
1974	2,038	57,242	45,714	104,337	50,303	259,634
1975	2,587	32,051	30,962	203,015	23,968	292,583
1976	384	15,481	19,126	139,439	6,868	181,298
1977	671	67,023	8,401	419,107	13,300	508,502
1978	2,682	41,574	55,578	224,715	16,545	341,094
1979	2,720	66,373	28,083	648,212	35,507	780,895
1980	580	107,418	16,580	45,560	26,269	196,407
1981	1,565	182,905	22,611	435,268	34,571	676,920
1982	1,648	193,360	31,671	25,484	18,615	270,778
1983	567	48,942	62,430	208,167	20,144	340,250
1984	892	91,653	41,359	343,255	70,258	547,417
1985	1,690	264,987	91,220	584,946	69,661	1,012,504
1986	1,704	145,709	194,912	308,484	82,289	733,098
Average 1960 to 1986	1,441	82,161	47,130	278,901	41,622	451,254
1987 PRELIMINARY	836	136,427	34,534	243,482	42,025	457,304

Table 3. Southeast Alaska annual Stikine River (District 8) commercial drift gill net salmon catches in numbers by species. (ADF&G 1/10/88)

Year	Chinook	Sockeye	Coho	Pink	Chum	Total
1960	7,824	13,639	27,480	5,584	8,189	62,726
1961	7,243	21,557	36,858	52,295	12,535	130,488
1962	7,491	27,514	38,399	36,375	20,306	130,085
1963	1,431	9,979	11,612	10,198	11,024	44,244
1964	2,911	20,299	29,388	114,555	10,771	177,924
1965	3,106	21,419	8,301	4,729	2,480	40,035
1966	4,516	36,710	16,493	61,908	17,730	137,357
1967	6,372	29,226	6,747	4,713	5,955	53,013
1968	4,604	14,594	36,407	91,028	14,537	161,170
1969	5,023	19,210	5,823	11,884	2,312	44,252
1970	3,207	15,120	18,403	20,523	12,305	69,558
1971	3,717	18,143	14,876	21,806	4,665	63,207
1972	9,332	51,734	38,520	17,153	17,363	134,102
1973	9,254	21,387	5,837	6,585	6,680	49,743
1974	8,199	2,428	16,021	4,188	2,107	32,943
1975	1,534	0	0	0	1	1,535
1976	1,123	18	6,056	722	124	8,043
1977	1,443	48,374	14,405	16,253	4,233	84,708
1978	531	56	32,650	1,157	1,001	35,395
1979	91	2,158	234	13,478	1,064	17,025
1980	631	14,053	2,946	7,224	6,910	31,764
1981	283	8,833	1,403	1,466	3,594	15,579
1982	1,033	6,886	19,971	16,988	741	45,619
1983	47	178	15,484	4,171	675	20,555
1984	14	1,290	5,141	4,960	1,892	13,297
1985	20	1,060	1,926	5,325	1,892	10,223
1986	102	4,185	7,439	4,901	5,928	22,555
Average 1960 to 1986	3,373	15,187	15,512	20,006	6,556	60,635
1987 PRELIMINARY	149	1,620	1,015	3,331	949	7,0064

Average pink salmon returns are forecasted for District 6 spawning streams. As these returns are harvested in mixed stock fisheries prior to entering District 6, it is difficult to anticipate local availability. However, since the fishery occurs in a major migration corridor, good numbers of pink salmon, destined for other districts, may be available at certain times of the year.

The return of natural coho salmon stocks is expected to be below average as a result of the harsh weather conditions during the winter of 1985/86. Coho salmon returns to both state and privately operated enhancement facilities are also expected to contribute catch to these fisheries.

Management Goals

In addition to the general gill net managment goals listed above, the following are specific management goals for Districts 6 and 8 during 1988:

1. Minimize the interception of mature chinook salmon entering the Stikine River.

2. Obtain pink salmon spawning escapement goals in Districts 6 and 7 which have been depressed in recent years.

3. Improve sockeye salmon spawning escapement levels to Alaskan island producing systems.

Management Plan

The 1988 Stikine River sockeye return should be strong enough to fulfill treaty obligations and allowing drift gillnetting in both Districts 6 and 8. The general summer sockeye salmon fishing season in both districts can be expected to open on Sunday, June 19 for a 48-hour period. Special terminal hatchery areas will be open prior to this as discussed in the hatchery fishery portion of this management plan. Beyond the initial period, fishing will depend on assessments of the abundance of sockeye salmon stocks in relation to spawning escapement needs and terms of U.S./Canada Pacific Salmon Treaty.

Management during the sockeye salmon fishing season will be based on the results of test fishing, catch per unit of effort analysis, the Stikine River indexing program, and analysis of scale patterns to determine the availability of Stikine River fish. All of these stock strength indicators, together with information from Canadian commercial, test and subsistence fisheries will be incorporated with a Stikine River sockeye salmon management model. This management model will, as the season progresses, be the primary management tool to estimate the availability of sockeye salmon available for harvest by the Alaskan fishery in District 8 and the Canadian in-river fisheries.

Test fishing is anticipated to begin prior to the opening of the general commercial season. The objectives of the test fishing are to determine the relative abundance of sockeye salmon by area and to obtain sockeye salmon scales in areas where limited or no commercial fisheries are anticipated.

Any required conservation measures for Stikine River sockeye salmon will first be implemented in District 8 followed by Sumner Strait in District 6. If the return of sockeye salmon to Alaskan island producing systems is determined to be weak, area and time restrictions will be necessary in District 6.

The area around the mouth of the Stikine River and other known milling areas for chinook salmon in District 8 will be closed during the early portions of the season. In early July, some of the area restrictions could be removed if the incidental catch of chinook salmon is low and the sockeye return justifies fishing in District 8.

Pink salmon should begin to enter the District 6 fishing area in significant numbers by the third or fourth week of July. No early season pink salmon restrictions, including gill net mesh, are anticipated. The early portion of the pink salmon fishery will be managed primarily on catch per unit of effort. By mid-August the pink salmon destined for the local systems will begin to enter the fishery in greater numbers and, at that time, management will be based more on observed local escapements. In the event that the strength of the local return is not evenly dispersed within the district, or is weaker than anticipated, restrictions or total closures may be necessary. Depending upon the strength of the return to District 8, a limited pink salmon directed fishery could occur within the district.

The coho salmon season will occur during late August and early September. Limited terminal coho salmon directed fishing coho salmon is anticipated in Distict 8. Management of the District 6 coho salmon fishery will be based predominately on wild stock catch per unit of effort analysis. The State operated Crystal Lake hatchery and Southern Southeastern Regional Aquaculture Association facility returns are expected to contribute coho salmon to the Districts 6 and 8 fisheries and may complicate the use of catch data to manage those fisheries. Inseason estimates from microwire tag recovery data will be used to identify the hatchery component of the catch. Only the catch of natural coho salmon will be used for fishery performance evaluation.

To test the feasibility of harvesting good numbers of hatchery stocks in District 6, while avoiding the over harvest of wild stocks, fishing time may be restricted in early September and increased in mid to late September when hatchery stocks are normally much higher. This will depend on the assessed availability of both natural and hatchery stocks.

Regulations allow gillnetting along the Screen Island shore of Section 6-D during the early and later portions of the season [5 AAC 33.310(c)(2)(B)]. Section 6-D west of a line from Mariposa Rock buoy to the northernmost tip of Point Harrington to a point on the shore of Etolin Island at 56°09'36" N. lat., 132°42'42" W. long., to the southernmost tip of Point Stanhope will be

open from the third Sunday in June (June 19) through the last Saturday in July (July 30) and from the second Sunday in September (September 11) until the season is closed. Fishing periods will be the same as the gill net periods in Section 6-C.

TAKU/SNETTISHAM GILL NET FISHERY

Introduction

The Taku/Snettisham gill net area encompasses Section 11-B (Taku Inlet, Port Snettisham, and Stephens Passage south to Midway Island) and Section 11-C (Midway Island south to a line from Point League to Point Hugh). Table 4 shows salmon catches by species for this fishery since 1960. The fishery targets on sockeye salmon during the early portions of the season and on fall chum and coho during the later part of the season. An increasing number of hatchery produced summer chum salmon has been present in recent years and the numbers are expected to increase and become a more important management consideration in the future.

1988 Outlook

The new transboundary river annex of the U.S./Canada Pacific Salmon Treaty, provides for a Canadian harvest share of 18% of the total allowable sockeye catch originating in the Canadian segment of the Taku River drainage. Beginning in 1988, the Canadian fishery will be allowed to harvest no more than 3,000 coho salmon. The Canadian take of chinook, pink and chum salmon will be considered an incidental harvest in the directed sockeye and coho salmon fisheries. Gillnetters are encouraged to contact the department management staff for more details concerning the new provisions of the treaty.

An overall below average gill net salmon harvest is expected in 1988. Parent year sockeye (1983) and fall chum (1984) harvests were 45% and 13% below the previous 20 year average, respectively. Additionally, spawning escapements for both species were generally below average. Taku River coho salmon escapements were good in the parent year. However, marine conditions were not favorable during the smolt outmigration and, consequently, below average coho salmon returns may result. Pink salmon returns are expected to be poor to both the Taku River drainage and other local Stephen Passage streams. A total return of slightly over 100,000 chum salmon to the Snettisham Hatchery is expected to provide a harvest of approximately 34,000 fish to the Taku/Snettisham drift gill net fishery.

Table 4. Southeast Alaska annual Taku/Snettisham (District 11) commercial drift gill net salmon catches in numbers by species. (ADF&G 1/10/88)

Year	Chinook	Sockeye	Coho	Pink	Chum	Total
1960	8,810	42,819	22,374	33,155	41,852	149,010
1961	7,434	45,981	15,486	41,455	24,433	134,789
1962	5,931	36,745	15,661	17,280	20,635	96,252
1963	2,652	24,119	10,855	21,692	20,114	79,432
1964	2,509	34,140	29,315	26,593	12,853	105,410
1965	4,170	27,569	32,667	2,768	11,533	78,707
1966	4,829	33,925	26,065	23,833	35,133	123,785
1967	5,417	17,735	40,391	12,372	22,834	98,749
1968	4,904	19,501	39,103	67,365	21,890	152,763
1969	6,986	41,169	10,802	73,927	15,049	147,933
1970	3,357	50,922	44,960	197,017	110,390	406,646
1971	6,958	66,181	41,830	31,484	91,145	237,598
1972	10,955	80,404	49,780	144,339	147,957	433,435
1973	9,799	85,317	35,453	58,186	109,245	298,000
1974	2,905	38,676	38,661	57,732	86,687	224,661
1975	2,182	32,513	1,185	9,567	2,678	48,125
1976	1,757	61,749	41,729	14,962	81,803	202,000
1977	1,068	70,097	54,917	88,578	61,102	275,762
1978	1,926	55,398	31,944	51,385	36,254	176,907
1979	3,702	122,376	16,192	152,410	61,200	355,880
1980	2,422	123,117	41,515	295,553	192,750	655,357
1981	1,720	49,765	26,803	255,029	76,092	409,409
1982	3,057	83,479	29,072	109,385	37,310	262,303
1983	888	31,627	21,443	66,080	15,188	135,226
1984	1,773	77,233	33,836	145,949	86,741	345,532
1985	2,651	88,192	55,597	311,248	106,720	564,408
1986	2,606	73,061	30,512	16,568	58,792	181,539
Average 1960 to 1986	4,199	56,067	31,043	86,145	58,829	236,282
1987 PRELIMINARY	2,060	74,525	35,157	357,708	121,630	591,080

Management Goals

The following are specific management goals for the District 11 drift gill net fishery:

1. Provide for sufficient salmon spawning escapements to the Taku River drainage, Port Snettisham, and Stephens Passage salmon spawning streams, while harvesting those fish in excess of escapement or brood stock needs.

2. Minimize to the extent practical, the incidental harvest of chinook salmon.

Management Plan

Section 11-B will initially open for a 72-hour period on the third Sunday of June (June 19) to begin the summer sockeye salmon season. Sockeye salmon return strength will be evaluated through catch per unit of effort analysis and weekly escapement estimates derived for the Taku River fish wheel tagging and recovery project.

The same information will be used to maintain the sharing agreements specified by the treaty. The contribution of the Port Snettisham sockeye salmon returns will be monitored weekly based on scale pattern analysis of the sockeye salmon catch. During the past 5 years Port Snettisham sockeye salmon contributed an average of 23% of the total sockeye salmon catch.

Protection of Port Snettisham sockeye salmon will again be attempted this year in order to rebuild production of these stocks to historical levels. To accomplish this and to provide protection to Snettisham Hatchery king salmon broodstock, Port Snettisham will be closed inside a line from Point Anmer to Point Styleman through approximately August 13.

The current regulations allow the department to establish a minimun six inch gill net mesh restriction by emergency order. If there is a need to direct more effort at chum salmon while protecting sockeye salmon it may become necessary to utilize the mesh restriction.

To minimize the harvest of mature chinook salmon returning to the Taku River, Taku Inlet will be closed north of the latitude of Jaw Point during the initial fishing weeks. In addition, night closures will be imposed if catches of juvenile chinook salmon are above average levels. Based on catch rates in previous years night closures could be expected through the end of July.

Special fishing periods to harvest pink salmon, beyond the directed sockeye salmon periods, in lower Stephens Passage are not anticipated, as poor pink returns are forecasted. Gillnetting in Section 11-C will depend on the availability of local returns of pink salmon in addition to returns to Seymour Canal and the northern portions of District 10.

Returns to the Port Snettisham hatchery are expected to contribute to the major portion of the summer chum salmon harvest. However, it is expected that all the available surplus fish will be taken during the general summer sockeye salmon fishery openings and no directed fishing for these hatchery chum salmon is expected.

Beginning in mid-August the inseason management emphasis will switch to the fall chum and coho salmon. Fishing time and area will then be dependent upon the developing run strength of the fall chum salmon and coho salmon wild stocks. Inseason management will be based on evaluation catch, catch per unit of effort, and fishing effort. The coho salmon catches and escapement estimates developed by the Taku River fish wheel project will be considered as additional inseason management information.

LYNN CANAL FISHERY

Introduction

The Lynn Canal drift gill net fishery includes Section 15-A in upper Lynn Canal, Section 15-C in lower Lynn Canal and Section 15-B, Berners Bay. Sockeye salmon are the target species during the summer season, while chum and coho salmon dominate the catch from late August through the end of the season. Table 5 shows salmon landings for recent years in the Lynn Canal drift gill net fishery.

1988 Outlook

The 1983 parent year (for five year old fish) sockeye harvest of approximately 369,000 salmon was 46% above the ten year average and the second highest on record. Excellent escapements of sockeye were achieved in both the Chilkat Lake and Chilkoot Lake systems. A record escapement of nearly 135,000 sockeye salmon was recorded at Chilkat Lake. A good distribution of the escapement was apparent including an early season (prior to August) escapement of over 50,000 fish. Sockeye salmon escapements through Chilkoot Lake weir exceeded 80,000 spawners in 1983. Survival conditions appear to have been favorable in recent years and returns of both Chilkat Lake and Chilkoot Lake sockeye salmon stocks are expected to be very good.

The 1984 parent year chum salmon harvest of approximately 642,000 fish was the second largest on record. Parent year chum salmon escapement surveys indicated excellent numbers of chum spawners in main channel spawning areas of the Klehini and Chilkat Rivers. Very good fall chum salmon returns are expected this season. Coho salmon escapements during the 1984 parent year were below average in several key index areas and overall below average returns are expected in 1988.

Table 5. Southeast Alaska annual Lynn Canal (District 15) commercial drift gill net salmon catches in numbers by species. (ADF&G 1/10/88)

Year	Chinook	Sockeye	Coho	Pink	Chum	Total
1960	1,453	59,604	10,964	1,760	58,562	132,343
1961	683	67,860	18,256	25,503	127,350	239,652
1962	806	103,696	24,436	2,041	115,036	246,015
1963	276	57,518	35,096	13,689	102,368	208,947
1964	771	68,200	33,347	6,602	103,047	211,967
1965	1,735	89,046	39,081	4,222	206,562	340,646
1966	868	108,087	40,794	6,008	235,172	390,929
1967	1,171	66,621	66,109	14,677	165,874	314,452
1968	1,489	80,004	43,262	7,803	169,615	302,173
1969	1,618	127,869	35,027	8,996	160,667	334,177
1970	1,771	79,115	48,643	19,839	271,415	420,783
1971	2,929	75,147	49,182	6,156	271,160	404,574
1972	986	81,010	57,971	14,520	349,681	504,168
1973	2,479	193,701	26,153	14,551	279,331	516,215
1974	1,672	152,086	64,809	6,398	443,970	668,935
1975	816	18,338	57,543	3,255	238,782	318,734
1976	2,142	127,089	71,984	4,429	375,033	580,677
1977	1,214	160,079	91,426	130,860	201,634	585,213
1978	536	108,480	53,165	3,811	118,428	284,420
1979	3,572	192,974	27,015	28,763	242,832	495,156
1980	440	53,085	28,845	81,832	168,870	333,072
1981	1,300	93,410	44,546	137,676	116,882	393,814
1982	5,945	273,538	72,247	69,128	306,350	727,208
1983	2,119	369,311	69,223	157,781	340,622	939,056
1984	6,207	334,566	68,210	76,499	643,678	1,129,160
1985	3,260	304,005	98,355	239,080	699,024	1,343,724
1986	2,772	289,889	82,121	38,115	381,382	794,279
Average 1960 to 1986	1,890	138,308	50,289	41,629	255,308	487,426
1987 PRELIMINARY	3,223	415,815	53,635	165,941	393,120	1,031,734

Management Goals

Specific management goals for the 1988 Lynn Canal drift gill net fishery are as follows:

1. Obtain an escapement count of between 60,000 to 80,000 sockeye salmon at the Chilkoot Lake weir.

2. Obtain an escapement count of between 70,000 to 90,000 sockeye salmon at the Chilkat Lake weir.

3. Continue efforts to improve the spawning escapement of the early run segment of the Chilkat Lake sockeye salmon stock.

Management Plan

The 1988 Lynn Canal gill net fishery will initially open on Sunday, June 19, for a 72-hour fishing period. During the initial fishing period, waters of Section 15-A south of the latitude of Seduction Point will be open.

Stock contribution by scale analysis of the first week's catch, as well as early Chilkoot River weir sockeye salmon counts, will be used to indicate the relative strength of early sockeye salmon returns. Following the opening fishing period, fishing time may be reduced to 48-hour periods, unless early sockeye strength is above average.

Following the development of the main body of the sockeye salmon runs, fishing time and area adjustments will be made according to stock specific catch and escapement results. Management will be based on catch rate analysis, stock composition from scale sampling, weir counts, observations of fish buildups and limited test fishing. Salmon migratory timing models will be utilized to provide an additional gauge of run strength. Gillnetters are encouraged to review these management methods with the local Area Management Biologist.

Chilkat Inlet will be closed until Chilkat River sockeye salmon run strength can be adequately determined. The closure is also designed to minimize the incidental harvest of mature Chilkat River chinook salmon, which are available early in the season.

Extensions of fishing time and/or area in portions of upper Chilkoot Inlet and Lutak Inlet can be expected after approximately 30% of the Chilkoot Lake escapement goal is achieved.

Portions of Section 15-C will be opened during early July to target on local summer chum and pink salmon stocks. This may include the eastern shore in the vicinity of Berner's Bay in an attempt to harvest Berner's Bay stocks

while they are of good quality. The open area will not extend below the latitude of Vanderbilt Reef light in order to avoid potential conflicts with sport fisheries. Additionally, portions of Berners Bay (Section 15-B) may be open early in the season to better assess the timing of pink and chum salmon stocks entering the bay.

Following the peak availability of summer chum and pink salmon stocks, the fishery will return to sockeye management and the approaches to Berners Bay will be closed. However, continued fishing along the western shore of Section 15-C may be allowed in order to target on pink and chum stocks returning to this area.

If sockeye run strength is above average for both Chilkat and Chilkoot stocks, portions of the St. Mary shoreline may be opened to relieve congestion at the Point Sherman line. As a general guideline, targeting fishing effort on sockeye salmon in Section 15-C will be limited until Chilkat Lake sockeye salmon run strength has been determined and portions of Chilkat Inlet have been opened, based on indications that an adequate escapement of the Chilkat Lake stock is being achieved.

Management during the early weeks of the fall season may be conservative until chum salmon run strength can be determined. Chilkat Inlet will initially be closed north of Glacier Point. If there is a surplus of late Chilkat River sockeye salmon, short openings within Chilkat Inlet will enable the harvest of late sockeye while avoiding an overharvest of early fall chum returns.

Management of Section 15-C during the fall season will be based on indications of chum and coho salmon run strength and fishing effort levels. As in recent years, the closure of Section 15-C north of the latitude of Point Bridget can be expected in September if inseason evaluation of coho salmon run strength indicates the need for conservation measures to ensure adequate spawning escapement.

TERMINAL HATCHERY FISHERIES

For the 1988 season, special drift gill net terminal area fisheries can be expected in Neets Bay, Carroll Inlet, Nakat Inlet and Earl West Cove to harvest salmon returning to Southern Southeastern Regional Aquaculture Association (SSRAA) enhancement facilities and in portions of Wrangell Narrows and Blind Slough to harvest salmon returning to the state operated Crystal Lake Hatchery.

Neets Bay Terminal Fishery

The fishery at Neets Bay will be managed jointly with SSRAA according to the Neets Bay Management Plan (5 AAC 33.370) approved by the Alaska Board of

Fisheries. The plan allows drift gillnetting from July 1 through October 20. The actual fishing periods will be announced in joint news releases by the Department and SSRAA.

SSRAA Contract Terminal Fisheries

Special private contract cost recovery fisheries are planned by SSRAA for Nakat Inlet, Carroll Inlet and Earl West Cove. Gillnetters need to contact the SSRAA for registration procedures and authorized fishing times. The department is requesting that gillnetters participating in these contract fisheries make special efforts to ensure their catch is reported to the correct statistical area.

Crystal Lake Chinook Salmon Terminal Fishery

There are two terminal fishing areas for harvesting chinook salmon returns to the state operated Crystal Lake Hatchery. One at the mouth of Crystal Creek in the Wrangell Narrows portion of District 6 and the other at the mouth of Blind Slough in District 8.

Crystal Lake Hatchery reared chinook salmon are expected to return and be available for harvest in terminal areas in both Districts 6 and 8. The projected 1988 return to the District 8 Blind Slough terminal area is approximately 1,100 fish. None of these fish will be taken for brood stock and all will be available for harvest. Approximately 6,400 chinook salmon, in excess to brood stock needs, are expected to return to the Wrangell Narrows terminal area in District 6 and be available for harvest by drift gillnet, troll, and sport fish gear.

The 1988 drift gillnet season will begin on Sunday, June 6 with a special one day open period in the Crystal Lake hatchery terminal fishing area in Wrangell Narrows. The terminal fishing area in the Blind Slough portion of District 8 will initially be open the following week, beginning June 12, for a two day fishing period. The fisheries in both areas are to allow opportunities to harvest chinook salmon returning from releases of Crystal Lake hatchery smolts. Subsequent open periods will be based on the fishing time allowed in the general sockeye salmon fishery and the need to utilize the available surplus chinook salmon.

The length of gillnet gear will be limited to 75 fathoms in the District 6 area and 150 fathoms in the District 8 area. Additionally, no maximum gillnet mesh restrictions will be required. Fishing will be limited to daylight hours in Wrangell Narrows.

Crystal Lake Terminal Coho Salmon Fishery

The Crystal Lake Hatchery is anticipating a total adult coho salmon return of 10,000 fish to the hatchery through Wrangell Narrows. These fish will contribute to both the general District 6 and Wrangell Narrows terminal gillnet fisheries.

Special openings beginning in late August or early September to harvest Crystal Lake Hatchery coho salmon can be anticipated in the District 6 portion of Blind Slough. The open periods in Wrangell Narrows will be limited to daylight hours to minimize conflicts of fishing vessels and other vessels. Gillnet gear in Wrangell Narrows will be limited to a maximum of 75 fathoms in length. Gill net gear in the District 8 terminal area will be limited to 150 fathoms in length.

SPECIAL COAST GUARD PROCEDURES FOR DISTRICTS 6 AND 15

The Department is including the following information at the request of the U.S. Coast Guard. The attached maps illustrate the areas of concern.

The Coast Guard has asked all gillnetters to allow unrestricted passage of large vessels such as state ferries and cruise ships by clearing standard tracklines prior to the passage of such vessels. Two areas, Snow Pass to Point Baker in District 6 and Battery Point in District 15 have become so congested that a voluntary traffic management system has been agreed to by the Alaska Marine Highway, the Southeast Alaska Pilots Association and the Southeast Alaska Gillnetters Association. Last year's trial of the system in District 15 proved very successful. Full cooperation of all parties is expected to ensure safe vessel operation again this year. In the event that the voluntary system fails to provide an adequate level of safety the Coast Guard will create a regulated navigation area providing enforcement and fines of up to $5,000 for violations. Vessels intentionally impeding safe vessel traffic are currently subject to fines of up to $5,000 for negligent operation. Tentative procedures are as follows:

Gillnetters

1. Monitor VHF Channels 13 and 16, listen for large vessels announcing time of passage.

2. Adequately mark net end (lights/radar reflectors).

3. Tell passing vessels where gear is set by shining spotlight along net or by radio contact.

4. Provide for two-way vessel traffic along tracklines shown in the attached chartletts.

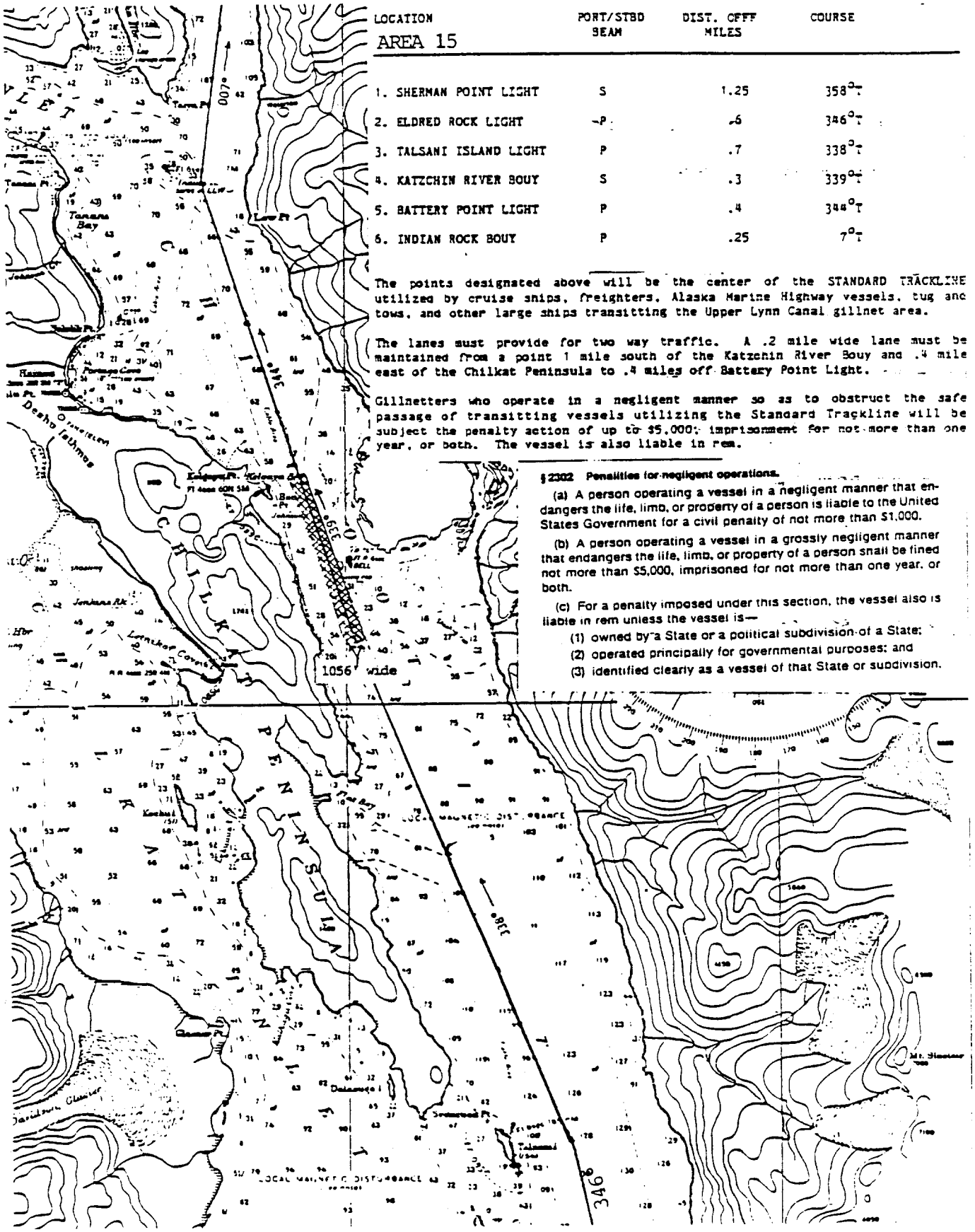
Ferries, Cruise Ships and Other Large Vessels

1. Announce on VHF Channel 13:

   A. Intent to transist;
   B. Vessel speed;
   C. ETA to area and to concentrations of vessels.

2. Announcements should be made at least 30-45 minutes prior to entering the area and at regular intervals.

3. Avoid meeting or overtaking other large vessels in the vicinity of Snow Pass or Battery Point.



LOCATION AREA 15	PORT/STBD BEAM	DIST. OFFF MILES	COURSE
1. SHERMAN POINT LIGHT	S	1.25	358°T
2. ELDRED ROCK LIGHT	P	.6	346°T
3. TALSANI ISLAND LIGHT	P	.7	338°T
4. KATZCHIN RIVER BOUY	S	.3	339°T
5. BATTERY POINT LIGHT	P	.4	348°T
6. INDIAN ROCK BOUY	P	.25	7°T

The points designated above will be the center of the STANDARD TRACKLINE utilized by cruise ships, freighters, Alaska Marine Highway vessels, tug and tows, and other large ships transitting the Upper Lynn Canal gillnet area.

The lanes must provide for two way traffic. A .2 mile wide lane must be maintained from a point 1 mile south of the Katzchin River Bouy and .4 mile east of the Chilkat Peninsula to .4 miles off Battery Point Light.

Gillnetters who operate in a negligent manner so as to obstruct the safe passage of transitting vessels utilizing the Standard Trackline will be subject the penalty action of up to $5,000; imprisonment for not more than one year, or both. The vessel is also liable in rem.

§ 2302 Penalities for negligent operations.

(a) A person operating a vessel in a negligent manner that endangers the life, limb, or property of a person is liable to the United States Government for a civil penalty of not more than $1,000.

(b) A person operating a vessel in a grossly negligent manner that endangers the life, limb, or property of a person shall be fined not more than $5,000, imprisoned for not more than one year, or both.

(c) For a penalty imposed under this section, the vessel also is liable in rem unless the vessel is—

(1) owned by a State or a political subdivision of a State;

(2) operated principally for governmental purposes; and

(3) identified clearly as a vessel of that State or subdivision.

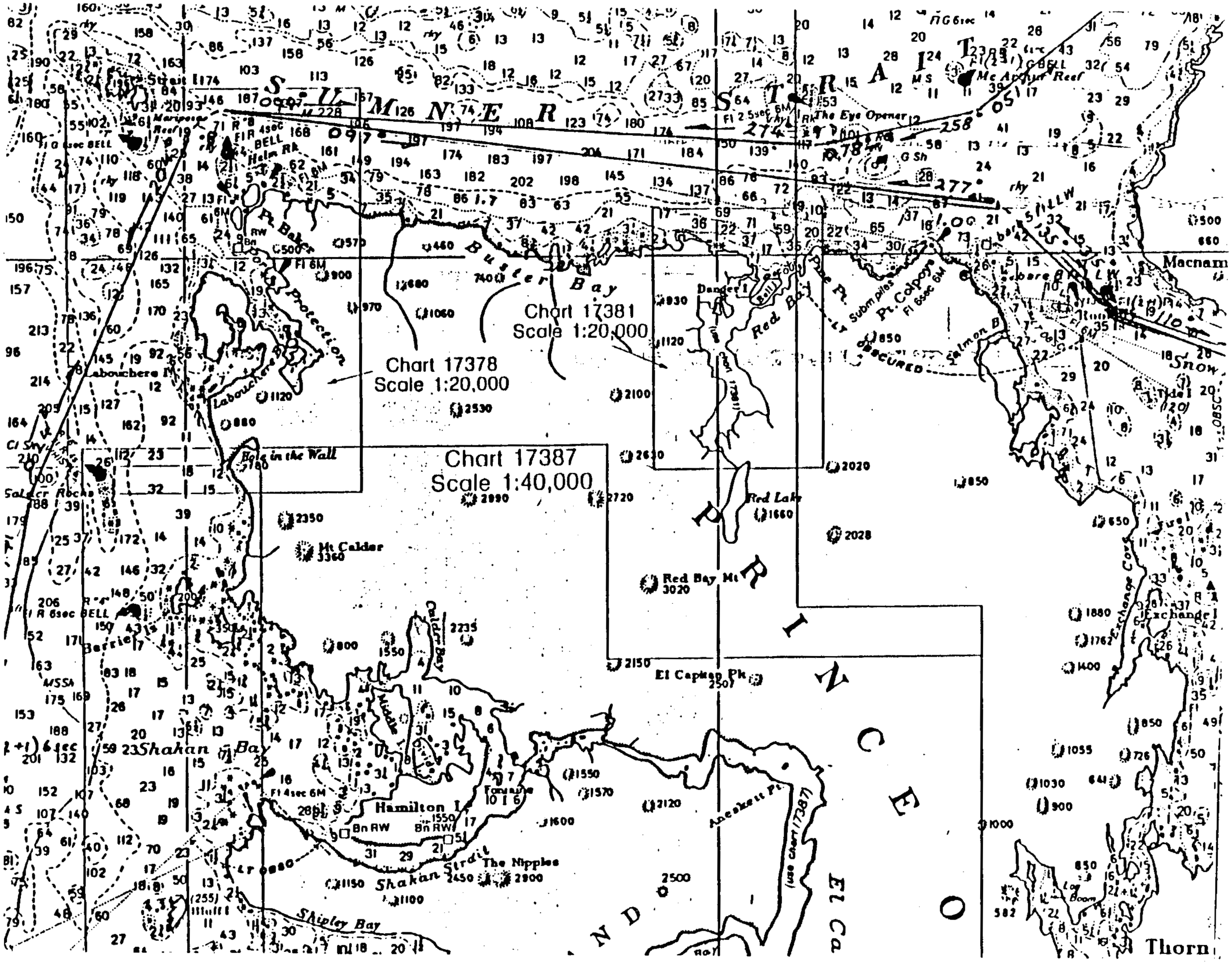


Chart 17378
Scale 1:20,000
Chart 17381
Scale 1:20,000
Chart 17387
Scale 1:40,000
SUMNER STRAIT
Buster Bay
Red Bay
Pt. Colpoys
Protection
Labouchere I.
Hole in the Wall
Mt Calder
Red Bay Mt
Red Lake
El Capitan Pk
Calder Bay
Hamilton I.
Shakan Bay
Shakan Strait
The Nipples
Shipley Bay
Exchange I.
The Eye Opener
McArthur Reef
P R I N C E O
N D
Macnam
Thorn

The following are Commercial Fisheries contacts regarding this management plan:

Dave Cantillon Region I Supervisor	Island Center Building P.O. Box 20 Douglas, Alaska 99824 (907) 465-4250
Paul Larson Region I Regional Management Biologist	Island Center Building P.O. Box 20 Douglas, Alaska 99824 (907) 465-4250
Gary Gunstrom Region I Research Supervisor	Island Center Building P.O. Box 20 Douglas, Alaska 99824 (907) 465-4250
Don Ingledue Juneau Area Management Biologist	Island Center Building P.O. Box 20 Douglas, Alaska 99824 (907) 465-4250
Phil Doherty Ketchikan Area Management Biologist	2030 Sea Level Dr., Ste 205 Ketchikan, Alaska 99901 (907) 225-5195
William Bergmann Petersburg Area Management Biologist	Box 667 Petersburg, Alaska 99833 (907) 772-3801
Randy Timothy Petersburg Assistant Area Management Biologist	Box 200 Wrangell, Alaska 99929 (907) 874-3822
Bob DeJong Sitka Area Management Biologist	Box 510 Sitka, Alaska 99835 (907) 747-6688
Ray Staska Haines Area Management Biologist	Box 431 Haines, Alaska 99827 (907) 766-2830

The following is a list of telephone numbers that may be called during the drift gill net fishing season to obtain recorded announcements concerning areas open to drift gill net fishing:

Ketchikan	-	(907) 225-6870
Petersburg	-	(907) 772-3700
Sitka	-	(907) 747-5022
Juneau	-	(907) 586-3505